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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,310	10/27/2003	Michiel van Nieuwstadt	81090826	3567

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EXAMINER

TRAN, BINH Q

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/694,310	NIEUWSTADT ET AL.	
	Examiner	Art Unit	
	BINH Q. TRAN	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 4, 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/27/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

The *numbering of claims* is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). **Misnumbered claims 12-21 have been renumbered claims 11-20.**

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically,

- In claim 12, line 1, “*claim 11*” is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-3, 5-12, and 14-20 are rejected under 35 U.S.C. 102 (e) as being anticipated by Laroo et al. (Laroo) (Patent Number 6,779,339).

Regarding claims 1-3, 5, 10-12, 14, and 19-20, Laroo discloses a method for simultaneously regenerating a particulate filter coupled to an internal combustion engine and for desulfating a lean NOx trap (e.g. 22, 23) disposed downstream of the particulate filter (e.g. 18, 19), comprising: adjusting at least one engine operating parameter to maintain a desired air fuel ratio for gases exiting the lean NOx trap in accordance with a difference between a reference set point air fuel ratio level and the air fuel ratio of gases exiting the lean NOx trap and wherein the reference set point level is changed between a rich air fuel ratio and a lean air fuel ratio as a function of the air fuel ratio of the exiting the lean NOx trap (e.g. See col. 8, lines 44-67; col. 9, lines 1-51; col. 10, lines 1-51).

Regarding claims 6-7, 10, 15, and 16, Laroo discloses a method for simultaneously regenerating a particulate filter coupled to an internal combustion engine and for desulfating a

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lean NO_x trap (e.g. 22, 23) disposed downstream of the particulate filter (e.g. 18, 19), comprising: adjusting the oxygen level into the particulate filter, comprising: reducing the oxygen content of the gas entering the particulate filter if the oxygen concentration measured by downstream oxygen sensor (e.g. 32, 33, 35) is greater than a predetermined level, such latter oxygen content being measured by the upstream oxygen sensor (e.g. 37, 39) (e.g. See col. 8, lines 44-67; col. 9, lines 1-51; col. 10, lines 1-51); increasing the oxygen content of the gas entering the particulate filter if the oxygen concentration measured by downstream oxygen sensor is less than the predetermined level, such latter oxygen content being measured by the upstream oxygen sensor (e.g. See col. 4, lines 33-67; col. 5, lines 1-67; col. 12, lines 26-47).

Regarding claims 8, 11, and 17, Laroo further discloses that the step of monitoring the temperature of the gas exiting the lean particulate filter and reducing the oxygen concentration into the particulate filter if such measured temperature becomes greater than a predetermined level (e.g. See col. 4, lines 33-67; col. 5, lines 1-67; col. 12, lines 26-47).

Regarding claims 9, and 18, Laroo further discloses that the step of monitoring the temperature of the gas exiting the lean NO_x trap and increasing the oxygen concentration into the particulate filter if such measured temperature becomes greater than a predetermined level (e.g. See col. 4, lines 33-67; col. 5, lines 1-67; col. 12, lines 26-47).

Allowable Subject Matter

Claims 4 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents:

Murachi et al. (Pat. No. 5746989), Khair et. al. (Pat. No. 6718757), Hirota et al. (Pat. No. 5974791), and Stroia et al. (Pat. No. 6745560), all disclose an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
April 02, 2005



Binh Q. Tran
Patent Examiner
Art Unit 3748